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Fitness Research Institute

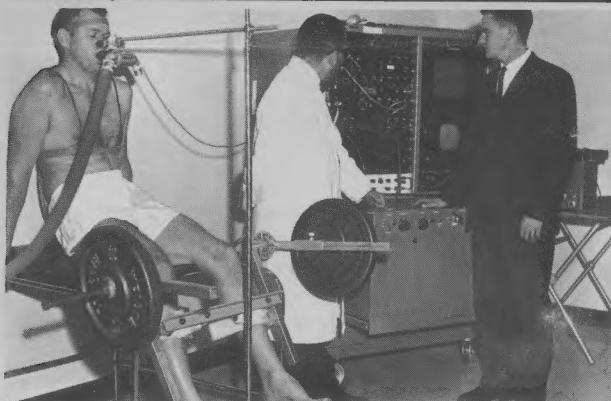
One of three Physical Fitness Research Units in Canada has been set up at the University of Alberta and is now carrying out studies in the basement floor of the Education Gymnasium. Ours is the only Fitness Research Unit in Western Canada, the other two being located at the University of Toronto and the University of Montreal. According to the Unit's Acting Director, Dr. Max Howell, the University of Alberta was chosen as the site of the western unit for two reasons. Firstly, the University of Alberta has the only physical education school in the British Commonwealth which has reached Faculty status and, secondly, it has by far the largest physical education graduate school in Canada with twenty-eight graduate students, ten of which, incidentally, are from Australia.

The general trend of the studies now being carried out in the unit is to gain more knowledge on the physical fitness of the Canadian population. The studies here differ from those at the other two units in that they relate more to physical education type research rather than to the physiology and hygiene aspects which are emphasized at Toronto and Montreal respectively.

The University receives, over a period of five years, \$50,000 per year from the national Department of Health and Welfare to carry out these studies. Staff members at the unit are Dr. Howell, Professor of Physical Education, Director of Research in the Physical Education Faculty, and past National President of the Canadian Association of Health, Physical Education and Recreation; Dr. R. B. Alderman, a Canadian-born U.B.C. and Berkeley graduate who has come from the University of Southern California where he was Director of Research in Physical Education; Dr. Pedro Paez, M. D., from Argentina, who has had nine years of training and experience in the physiology of exercise; and Dr. R. B. J. MacNab who has been Assistant Professor of Physical Education on the faculty for the past two years. Working with these men are six graduate students.

Dr. Howell's studies are concerned with strength - the range of strength amongst school children, means of increasing strength, and a comparison of the strength of rural and urban children. Dr. Alderman is studying the process of fatigue through a detailed analysis of aspects of cardiovascular endurance. At the moment he is waiting for equipment, some of which is identical to that used in the Gemini space program, which taps and records heart waves on-the-spot. Dr. Paez is concerned with the physiology of exercise in normal and abnormal persons. He is able to study the physiological responses of various individuals to exercise through his laboratory equipment which can measure these responses. Dr. MacNab is concerned with the validity and reliability of fitness tests. Currently he is examining the validity of the Sjostrand Test - a nation-wide test which is designed to determine the norms of work capacity in the Canadian population in order to predict how much work the individual can do. One other aspect of the studies being carried on at the Unit, which was under the direction of Dr. W. R. Morford who has now left the University, is the psychology of motor learning - what factors motivate learning, what happens to a person when he reacts to a stimulus or object, how do personalities affect reactions.

Although research with the Fitness Unit has been going on for the past year, the bulk of the equipment needed to pursue studies has only recently arrived. Dr. Howell credits the University Works Department for converting the basement area of the Education Gymnasium into research laboratories and offices in the short space of six weeks this summer. Research papers have already been published on findings at the Unit and will increase steadily for at least another four years, the period during which the Department of National Health and Welfare is contributing a quarter of a million dollars to the project.



In the Applied Physiology Lab eight different physiological tests are being measured at the same time on the Wedge Spirometer for Peter Carroll - respiratory rate, volume of respiration, velocity of air flow, heart rate, body temperature, oxygen consumption, carbon dioxide production, and endurance. Dr. MacNab (right) and Dr. Paez follow the readings on the spirometer.



Graduate student, Peter Carroll, is "hooked up" to the bicycle ergometer, a machine which measures the physical work capacity of the individual. Dr. Alderman (left) and Dr. Howell study his performance record on the monitor behind.

Faculty Notes

dentistry

According to DEAN H. R. MacLEAN of the Faculty of Dentistry, there is a need in dental schools today to attach more importance to the social and psychological aspects of dentistry. There is a need for the dentist to comprehend the many personality factors of a patient which can lead to his poor dental health, and a consequent fear of the dentist.

Preventive dentistry and community health studies are two areas in which the dental student encounters the social problems of dentistry. Further to this, the Faculty of Dentistry introduced last year, for the first time in Canada, a course on psychiatry in dentistry. This course is being offered again this year by DR. K. A. YONGE, Head of the Department of Psychiatry. It is an introductory course in psychiatry given in the second year of dentistry, which examines the psychological and personality factors of concern in dentistry as they relate to pain, anxiety, gagging, etc. Dr. Yonge points out that psychiatric teaching in dentistry is not an entirely new field in that books have been published on this for years, but this is the first time a conscious effort has been made in a Canadian Dental School to teach psychophysiology as it relates to the mouth.



JOAN CONKLIN
M.Sc. degrees in dental hygiene. She is Director of the Dental Hygiene Clinic and will take on some clinical teaching responsibilities in the new year. As Director of the Clinic she will supervise the students who will be cleaning teeth, applying stannousfluoride treatment, recording the medical and dental history of patients, and gaining experience in sterilization and patient education in dental health.

MISS MARGARET BERRY, Director of the School since its inception in 1961, feels that the school must continue to draw on dental hygiene graduates from the U. S. A. for teaching appointments due to a lack of dental hygiene degree programs to train personnel in Canada. At all four Dental Hygiene Schools in Canada at Dalhousie, Toronto, Montreal, and Edmonton, the two-year diploma program is the only one available. Miss Berry, herself a graduate of Columbia University, is concerned about the growing demand in Canada for highly trained personnel in Canada in the field of dental hygiene and the need to develop degree programs here.



Despite unseasonable cold weather, the Faculty Golf Tournament at the Municipal Golf Course was a rollicking success. Prizes were awarded at the annual Golf Banquet at the Faculty Club following the tourney. Pictured from left to right are Dr. G. B. Walker (electrical engineering), runner up to the winner of the Faculty Cup, awarded to the best golfer with a handicap under 25. (The winner, Reg Trollope of mathematics, was absent); Dr. W. D. Smith (physical education), winner of the Punch Bowl, awarded to the best golfer with handicaps from 25 - 36; (runner-up was Dr. J. A. Toogood of soil science); Dr. Pat L. Austin (physical education), Women's Champion, (runner-up was Miss Shirley Stinson of nursing); Dr. L. F. L. Clegg, President of the Faculty Club, who is congratulating the winners; Dr. Mike Sereda (medicine), Men's Champion (runner-up was last year's Champion, Mr. Brian MacDonald from the President's Office); Mr. J. M. Whidden, Bursar, who had the lowest gross score on 3 hidden holes; Dr. H. (Bud) Baadsgaard (geology), who had the lowest net score on the front nine; and Miss Margaret Richards, Information Officer, who had the dubious honour of scoring the highest gross total on the 3 hidden holes. Not pictured are Professor Bill McMinn (computing science), winner of the Thunder Trophy awarded for the highest gross score total and Archie Carran (psychology), who had the lowest net score on the back nine.

genetics and zoology

A prominent scientist in the fields of Genetics, Zoology, and Anthropology is a guest of the University of Alberta for one year as Visiting Professor of Genetics and Zoology. DR. J. A. SERRA of Portugal is Head of the Department of Zoology-Anthropology (including Genetics) at the University of Lisbon and serves as Director of the Museum and Laboratory of Zoology at that University. Dr. Serra is considered "the" Professor of Zoology in Portugal. He has been founder, editor, and publisher of two biology reviews in Portugal and is author of hundreds of published works in genetics, zoology, physiology and biochemistry, anthropology, cytology and cytochemistry, statistics, applied genetics, and wool technology. He has participated in scientific meetings throughout the world and is widely acclaimed for his work in the biological sciences.

During his year at the University of Alberta Dr. Serra will assist in graduate work and deliver lectures. He will also work on the third and final volume of his text "Modern Genetics" - an 1800 page text he is writing, the first volume of which is already published. DR. C. O. PERSON, Head of the Department of Genetics, feels the University is extremely fortunate to have obtained his services for the year.

pharmacology and biochemistry

DR. E. E. DANIEL, Head of Pharmacology and DR. TAI NIHEI, Assistant Professor of Biochemistry, were two of seven Canadian scientists to be awarded medical research grants totalling \$162,200 by the Life Insurance Medical Research Fund. Dr. Daniel will receive \$33,000 over a period of two years to continue investigation into smooth muscle contractility, a study he has been conducting over the past ten years. Dr. Nihei received \$26,400 for his studies on the biophysics of muscle proteins.

Emergency procedures have been put into effect by the Office of the Superintendent of Buildings in case of fire, accident, or trouble with electricity, steam, gas, plumbing etc. on campus during "off-duty" hours. In short, ANY EMERGENCY PROBLEMS SHOULD BE REPORTED TO THE UNIVERSITY SWITCHBOARD. The switchboard in turn will call designated tradesmen who are on call and are held responsible for returning to the campus and getting any additional assistance as required.

ukrainian exchange

An agreement of co-operation and exchange on scientific and cultural matters has been signed between the T. G. Shevchenko Kiev State University of the Ukrainian Soviet Socialist Republic and the University of Alberta. Under terms of the agreement both Universities envisage the exchange of information on the development of teaching and research, of publications such as scientific articles and textbooks, and of such items as specimens from botanical gardens and zoological collections, tape recordings, and photographic slides.

The real success of the agreement or Protocol, rests on an exchange of scholars and students. One or two scholars from each University will spend a maximum period of two months giving lectures, tutorials, and carrying out research at the host University. Two students per year will be exchanged for the maximum period of a year. Prior to November 1st of each year the Universities will compose a plan of co-operation which will include definite undertakings for the following year.

Exchanges have already been arranged for this year, involving students and books, by a University Committee on Exchange with the Shevchenko State University at Kiev composed of PROF. O. STARCHUK, PROF. JULIAN LAYCHUK, DR. METRO GULUTSAN, and DR. R. G. IRONSIDE. Two students from Kiev, Mrs. Bliznichenko and Mrs. Mary Martanova who have completed eight years of philosophy and English, have been admitted for graduate study in English. They have also been appointed teaching assistants in the Department of Slavonic Languages. The students from the University of Alberta who are being sent to Kiev are William R. Novakshonoff and Kyri Holden of the Department of Slavonic Languages. In addition, four parcels of books have arrived from Kiev and arrangements are being made to send books in return. The Departments of Zoology and Botany have shown interest in exchanging with Kiev botanical and zoological specimens; the Department of Geography is exchanging colour slides of various aspects of Alberta's geography for those of the Kievan/Dnieper Region in the U. S. S. R., while there exists the possibility of tape recordings of Eskimo/Indian dialects being exchanged between the two universities.

Suggestions for the exchange of specimens, slides, and tape recordings in other academic fields are solicited by the Committee. Departments, individual members of staff or students, who are interested in contributing to the Exchange Scheme should contact any member of the above Committee. It is to be noted that any submissions or suggestions must be made by OCTOBER 20TH to allow the Committee time to plan the exchanges for the following year.



The largest single building to be constructed on campus will be the Biological Sciences Building on Saskatchewan Drive, north of the Math-Physics Building. It will accommodate the departments of micro-biology, botany, genetics, zoology, and psychology, and will include a large aquarium, greenhouses, and stabilized microscopy equipment. The brick and stone building will rise to a height of 12 floors, the lower levels generally being used for undergraduate teaching and the upper floors accommodating research. Tenders will be called in the spring of 1966 and construction is expected to be completed by the fall of 1968.

economics and mathematics



During the past year a few University of Alberta faculty members were honoured abroad by being asked to assist or teach in areas in which they were particularly acclaimed. PROF. G. K. GOUNDRY was one of these. He has been G. K. GOUNDRY on a two-year advisory mission to Zambia under the United Nations technical assistance program. Professor Goundry in June 1963 accepted a request by the former Government of Northern Rhodesia to assist in the field of economic planning, programming and administration. When the independent state of Zambia was created in October, 1964, he became advisor to the new Government and worked closely with its President, Dr. Kenneth Kaunda. He was particularly concerned with the expansion of development plans and with the economic and financial aspects of the educational system, agriculture and transport. He has

now returned to Edmonton to resume his teaching post in Economics. DR. LEE LORCH, Professor of Mathematics, has returned from a year in Europe during which time he was Guest Professor at Aarhus University in Denmark and briefly, in this same capacity at the Royal Institute of Technology in Stockholm, Sweden. At both places he conducted seminars on ordinary differential equations. He also delivered research lectures in Scotland, England, Switzerland, Czechoslovakia, Poland, and Sweden. DR. J. J. McNAMEE who holds a joint appointment as Professor in Mathematics and Computing Science, spent the year as Visiting Professor at the University of Oklahoma under the auspices of the National Science Foundation. There he lectured and set up a program of numerical analysis similar to the program now established in our Department of Computing Science. He felt the year helped to strengthen an informal exchange of information between the two universities. DR. W. C. WONDERS, Head of the Department of Geography, is at the University of Oklahoma this year, also under the auspices of the National Science Foundation.

calendar of events, october 1st to 15th

- Oct. 1 - T.G.I.F. at the Faculty Club, 4 - 6 p.m., followed by curried shrimp supper.
- Oct. 2 - Football Game - U.A.C. Dinosaurs versus the U of A Golden Bears, Clark Stadium, 2 p.m. Rush seats: adults \$2.00; students \$1.00; children \$.50.
Dinner Dance at the Faculty Club.
- Oct. 7 - Faculty Curling: a meeting at 5 p.m. in the Upper Bar Lounge of the Faculty Club is being held for all faculty members interested in participating in a faculty curling league once a week. Beginners and seasoned curlers are welcome. Call Mr. L.P. Morgan at ext. 490 if unable to attend.
- Oct. 9 - Teach-in on Viet Nam: A live broadcast from Toronto will be received at the University and heard in Math-Physics 126 at 11 a.m. on Viet Nam. Panelists include: Patrick Gordon Walker, freelance British investigator in Viet Nam; Robert Scalopino, representing the U.S. State Department; a possible ministerial counsel to the United Nations Saigon delegation; one other Saigonese; Mr. Birchett, Australian Commonwealth Newspaper representative in Viet Nam; Phuong Margain, who was a Cambodian Cabinet Minister; and two additional Cambodians. The panel discussion will last three and one half hours and will be followed by further discussion by a local panel of experts, organized by Professor Neville Linton. The session is open and free. Sandwiches and coffee will be available.
Dinner Dance at the Faculty Club.
- Oct. 11 - Thanksgiving Day: classes cancelled, offices closed. Family dining at the Faculty Club.
- Oct. 12 - 1965 Henry Marshall Tory Lectures: Mr. Blair Fraser, Ottawa Editor of Macleans magazine, will speak on "Canada: Laboratory of World Problems - The Problem of Loyalty." Jubilee Auditorium, 8:30 p.m. Open & free.
- Oct. 13 - 1965 Henry Marshall Tory Lectures: Mr. Blair Fraser, Ottawa Editor of Macleans Magazine, will speak on "Canada: Laboratory of World Problems - The Problem of Apartheid." Jubilee Auditorium, 8:30 p.m. Open & free.
- Oct. 14 - Law School Forum: the four federal candidates in the Edmonton Strathcona constituency will present their platforms, followed by questions from the floor, Convocation Hall, 12:15 p.m.
- Oct. 15 - Wine Tasting Party at the Faculty Club.

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NOTICE: Any faculty members or their wives who would be interested in extending hospitality to foreign students once or twice a month in their homes are asked to contact Dean R. C. W. Hooper at ext. 483, or Mrs. Hooper at 434-5077.

awards, fellowships, etc.

The Woodrow Wilson Foundation again offers 1,000 awards in the U.S.A. and Canada. The value has been increased effective 1966-67 to \$2,000 plus tuition fees plus allowances for dependent children. The program is primarily intended for first year graduate study for those interested in pursuing a career in college level teaching. They are open to men and women in the Humanities, Social Sciences, Natural and Physical Sciences, and Mathematics. Candidates must initially be nominated by their Departments. The only way this University can receive its proper share of their awards is by this means. We ask you to consider promising students in your Department. Nominations are due October 31, 1965.

The Association of Universities and Colleges of Canada has announced that the C. D. Howe Memorial Fellowships for post-doctoral studies in an unrestricted field of study are available. The awards are worth \$5,000 plus, where applicable, reasonable travel expenses. If the winner is married, an additional allowance of \$2,000 plus travel expenses of family will be paid. The one year awards are intended for Canadians or persons normally resident in Canada. Preference will be given to candidates who are not more than 35 years of age; applications from candidates more than 38 by December 31st in the year of competition will not be considered. Closing date for applications is November 8. Direct enquiries to Director of Awards, A. U. C. C., 75 Albert St., Ottawa 4, Ontario.

World University Service of Canada is inviting applications from Canadian faculty members to attend the 1966 Seminar in Turkey from June 15 to August 20. The faculty members will assist in program planning and lead discussion groups in several academic fields for some 40 students chosen from Canadian universities on the basis of academic merit, leadership ability, and general personal qualifications. Deadline for applications is October 12. Further information about the seminar program and the responsibilities of faculty members can be obtained from World University Service of Canada, 328 Adelaide St. West, Toronto 2B, Ontario.

A long standing regulation of the University forbids smoking in classrooms and laboratories.

In certain areas this is a fire or safety measure and appropriate notices will be posted by the Fire Marshall and Safety Officer.

In general classrooms and laboratories the regulation is intended to protect those persons who are non-smokers from a needless distraction and to minimize litter and damage to floors and woodwork.

It is realized that some instructors will always wish to make their own rules on matters of this kind. The co-operation of all is, however, sought in calling the regulation and the reasons for it to the attention of students, freshmen in particular.

Suggestions for more hall ash-stands and for improvements to the areas provided for between-class relaxation will be welcomed. (Phone Caretaking Services, Ext. 225).

President's Office

folio deadline
is the
9th and 24th
of each month